

WR-35  
Rev (9-11)

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas  
Well Operator's Report of Well Work

DATE: 1/11/2013  
API #: 47-033-05627

RECEIVED

Farm name: Jones, John R. & Catherine V. Operator Well No.: Hurst Unit 2H

LOCATION: Elevation: 1176' Quadrangle: Wolf Summit JAN 14 2013

District: Sardis County: Harrison WV GEOLOGICAL SURVEY  
Latitude: 12680' Feet South of 39 Deg. 20 Min. 00 Sec. MORGANTOWN, WV  
Longitude 5655' Feet West of 80 Deg. 22 Min. 30 Sec.

Company: Antero Resources Appalachian Corp

Address:	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
1625 17th Street Denver, CO 80202	20" 94#	80'	80'	77 Cu. Ft. Class A
Agent: CT Corporation System	13 3/8" 54.5#	367'	367'	510 Cu. Ft. Class A
Inspector: Tristan Jenkins	9 5/8" 36#	2579'	2579'	1050 Cu. Ft. Class A
Date Permit Issued: 6/19/2012	5 1/2" 20#	13911'	13911'	3403 Cu. Ft. Class H
Date Well Work Commenced: 6/26/2012				
Date Well Work Completed: 10/25/2012				
Verbal Plugging: N/A				
Date Permission granted on: N/A	2 3/8" 4.6#	7178'		
Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig <input type="checkbox"/>				
Total Vertical Depth (ft): 7126' TVD (deepest point drilled)				
Total Measured Depth (ft): 7042' TVD (BHL), 13911' MD				
Fresh Water Depth (ft.): est. 30', 230'				
Salt Water Depth (ft.): 853', 1535'				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): Pad is constructed on reclaimed PHG coal bench				
Void(s) encountered (N/Y) Depth(s) None				

OPEN FLOW DATA (If more than two producing formations please include additional data on separate sheet)

Producing formation Marcellus Pay zone depth (ft) 7081' TVD (Top)

Gas: Initial open flow ----- MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow 5235 MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure 3300 psig (surface pressure) after ----- Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_

Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d

Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d

Time of open flow between initial and final tests \_\_\_\_\_ Hours

Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this document and all the attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information I believe that the information is true, accurate, and complete.

Shouma Redin  
Signature

1/11/2013  
Date

Were core samples taken? Yes \_\_\_\_\_ No **X**

Were cuttings caught during drilling? Yes **X** No \_\_\_\_\_

Were Electrical, Mechanical or Geophysical logs recorded on this well? If yes, please list **Yes - CBL**

This is a subsequent well. Antero only runs wireline logs on the first well on a multi-well pad (Hurst Unit 1H, AP# 47-033-05826). Please reference the wireline logs submitted with Form WR-35 for Hurst Unit 1H.

**NOTE: IN THE AREA BELOW PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF THE TOPS AND BOTTOMS OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE FROM SURFACE TO TOTAL DEPTH.**

Perforated Intervals, Fracturing, or Stimulating:

Perforations: 7237'-13,847' (1428 holes)

Frac'd w/ 11,592 gals 15% HCL Acid, 140,306 bbls Slick Water carrying 684,590# 100 mesh, 2,657,020# 40/70 and 1,739,500# 20/40 sand.

Plug Back Details Including Plug Type and Depth(s): **N/A**

<u>Formations Encountered:</u>	<u>Top Depth</u>	<u>Bottom Depth</u>
<u>Surface:</u>		
Big Lime est.	1436'	1486'
Big Injun est.	1487'	2028'
Fifty Foot Sandstone est.	2029'	2210'
Gordon est.	2211'	2455'
Fifth Sandstone est.	2456'	2487'
Bayard est.	2488'	3146'
Speechley	3147'	3370'
Balltown	3371'	3908'
Bradford	3909'	4476'
Benson	4477'	4864'
Alexander	4865'	5140'
Elk	5141'	6647'
Middlesex	6648'	6823'
Burket	6824'	6855'
Tully	6856'	7080'
Marcellus	7081'	7126' TVD

**Hydraulic Fracturing Fluid Product Component Information Disclosure**

Fracture Date:	10/20/2012
State:	WV
County:	Harrison
API Number:	47-033-0627
Operator Name:	Antero Resources
Well Name and Number:	Hurst 2H
Longitude:	-80.41985
Latitude:	39.3174611
Long/Lat Projection:	NAD27
Production Type:	Gas
True Vertical Depth (TVD):	7,942
Total Water Volume* (gal):	5,892,832

**Hydraulic Fracturing Fluid Composition:**

Trade Name	Supplier	Purpose	Compositional or Formulary Components Disclosed	Chemical Abstract Number (CAS #) - If applicable	Maximum Component Concentration in Additive (% by mass)**	Maximum Component Concentration in HF Fluid (% by mass)**	Comments
AL-300	U.S. Well Services, LLC	Acid Corrosion Inhibitors	2-Butoxyethanol Cinnamalddehyde Ethoxyethyl Nonylphenol Ethylene Glycol Isopropyl Alcohol N,N-Dimethylformamide Tar bases, quinoline derivs, benzyl chloride-quaternized Triethyl Phosphate Water	111-76-3 104-65-2 68413-51-4 107-31-1 67-63-9 68-12-2 73489-78-7 78-48-9 7732-18-8	7.00% 5.00% 5.00% 31.00% 3.00% 15.00% 13.00% 3.00%	0.0002% 0.0002% 0.0001% 0.0001% 0.0001% 0.0004% 0.0001% 0.0000%	
Bio-clear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent	2,2-dibromo-3-nitropropionamide	10222-91-2	20.00%	0.0050%	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Deionized Water Guar Gum Petroleum Distillates	7732-18-8 9066-36-9 64742-47-8	20.00% 50.00% 60.00%	0.0025% 0.0042% 0.0216%	
AP One	U.S. Well Services, LLC	Gel Breakers	Surfactant	68439-31-0	3.00%	0.00025%	
WFRA-405	U.S. Well Services, LLC	Friction Reducer	Suspending agent (solid) Ammonium Persulfate Anionic Polyacrylamide Ethoxylated alcohol blend	14808-99-7 7727-34-9 Proprietary Proprietary	100.00% 100.00% Proprietary Proprietary	0.00025% 0.00116% 0.00287% 0.00287%	
SI-1000	U.S. Well Services, LLC	Scale Inhibitor	Water Ammonium Chloride Petroleum Distillates Ethylene Glycol	7732-18-8 12125-02-9 64742-47-8 107-31-1	40.00% 5.00% 22.00% 30.00%	0.00287% 0.0043% 0.0043% 0.0030%	
Sand	U.S. Well Services, LLC	Proppant	Anionic Copolymer	Proprietary	Proprietary	9.34987%	
HCL Acid (12.5%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Crystalline Silica, quartz Hydrogen Chloride	14808-90-7 7641-91-1	100.00% 18.00%	0.06417%	
Water		Carrier/Base Fluid	Water	7732-18-8 7732-18-8	87.50% 100.00%	0.19428% 99.33742%	

\*Total Water Volume sources may include fresh water, produced water, and/or recycled water

\*\* Information is based on the maximum potential for concentration and thus the total may be over 100%

All component information listed was obtained from the supplier's Material Safety Data Sheets (MSDS). As such, the Operator is not responsible for inaccurate and/or incomplete information. Any questions regarding the content of the MSDS should be directed to the supplier who provided it. The Occupational Safety and Health Administration's (OSHA) regulations govern the criteria for the disclosure of this information. Please note that Federal Law protects "proprietary", "trade secret", and "confidential business information" and the criteria for how this information is reported on an MSDS is subject to 29 CFR 1910.1200(i) and Appendix D.